

CLAIMS

WHAT IS CLAIMED IS:

1. A filter monitor for sensing the condition of a filter in a vacuum cleaner connected to a power source, the vacuum cleaner having a flow chamber between the filter and a flow inducing device selectively driven by the power source, comprising:

an electrical circuit including a pressure actuated switch; and

an indicator visible to a user connected to the circuit;

wherein the pressure actuated switch is closed to complete the circuitry between the indicator and electrical power source in response to an increase in pressure drop across the filter indicating that the filter requires cleaning or replacement.

2. The filter monitor of claim 1, wherein said indicator is a light.

3. The filter condition monitor of claim 1, wherein said circuit includes a resistor to reduce voltage across the circuit to a level compatible with the indicator.

4. The filter monitor of claim 1, wherein the indicator is an audible indicator.

5. The filter monitor of claim 1, wherein said pressure actuated switch includes a pressure chamber with a pair of electrical leads and a conductive member space from at least one lead and biased away from the other at least one lead, wherein the conductive member is displaced to contact both leads in response to an increase in pressure drop across the filter resulting in a decrease in pressure in the vacuum chamber due to clogging of the filter.

6. The filter monitor of claim 5, further including a port connected to the vacuum device downstream of the filter.

7. The filter monitor of claim 3, wherein said circuit includes a latching relay, said latching relay being latched when said indicator is connected to said indicator by said pressure actuated switch.

8. The filter monitor of claim 1, wherein the pressure actuated switch includes an ambient air port to an ambient air source, and wherein the pressure actuated switch is

actuated when a predetermined pressure differential exists between the ambient air pressure and air flow downstream of the filter.

9. The filter monitor of claim 8, wherein the indicator is a light.

10. The filter monitor of claim 9, wherein the circuit further includes a resistor to reduce voltage across to a level compatible with said indicator.

11. The filter monitor of claim 10, wherein the circuit includes a latching relay, said latching relay being latched when said indicator is connected to said indicator by said pressure actuated switch.

12. A vacuum cleaner having a serviceable filter and a monitor for sensing the condition of the filter, comprising:

a housing for mounting a motor;

a muzzle housing for receiving an intake device;

a filter disposed between the nozzle housing and the motor;

an indicator means for indicating a need to service the filter; and

circuitry connecting the indicator means to a power source including a pressure actuated switch that completes a circuit between the power source indicator when the pressure between the filter and motor indicates a filter condition suggesting cleaning or replacement

13. The vacuum cleaner of claim 12, wherein said pressure actuated switch includes a pressure chamber with a pair of electrical leads and a conductive member space from at least on lead and biased away from the other at least one lead, wherein the conductive member is displaced to the leads in response to an increase in pressure in the vacuum chamber due to clogging of the filter.

14. The vacuum cleaner of claim 12, wherein the circuit includes a latching means for latching the indicator in an indicating condition after a pressure indicating a need to clean or replace said filter has been detected.

15. The vacuum cleaner according to claim 12, wherein the indicator is a light.

16. The vacuum cleaner of claim 12, wherein the light is an incandescent bulb.
17. The vacuum cleaner of claim 12, wherein the light is a light emitting diode.